



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/687,741  | 10/20/2003  | Yukio Umemura        | 062709-0114         | 9262             |
| 23428 7590 02/25/2008<br>FOLEY AND LARDNER LLP<br>SUITE 500<br>3000 K STREET NW<br>WASHINGTON, DC 20007 |             |                      |                     |                  |
| EXAMINER  |             |                      |                     |                  |
| WEINSTEIN, LEONARD J  |             |                      |                     |                  |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 3746  |             |                      |                     |                  |
| MAIL DATE   |             | DELIVERY MODE        |                     |                  |
| 02/25/2008  |             | PAPER                |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/687,741

**Applicant(s)**

UMEMURA, YUKIO

**Examiner**

LEONARD J. WEINSTEIN

**Art Unit**

3746

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 October 2007.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9, 12 and 13 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-9, 12 and 13 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. This office action is in response to the amendment of October 9, 2007. In making the below rejections and/or objections the examiner has considered and addressed each of the applicant's arguments.
2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 9, 2007 has been entered.
3. The examiner acknowledges the amendments to claims 1-5, 7, and 11.

#### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 2-5 and 7 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claims 2-5 and 7 are rejected because of the following: the recitation of the "the other of the driven member and the drive member that remains engaged with the link," does not provide a clear limitation in light of the specification. The recitation can be interpreted in one of two ways including --- the other member from the member that remains engaged with the link -- or --- the member that remains engaged with the link---. However in light embodiments of figure 5 and 9, and the limitations of claims 4, only the second interpretation is enabled by the specification. The examiner notes that this rejection is not considered an issue of enablement

under 35 U.S.C. 112, first paragraph because, even as the claims are unclear and ambiguous, one of ordinary skill in the art could interpret the limitations in a manner that is enabled by the specification. The embodiments in figure 5 and figure 9 show that a locking member 19 is formed or disposed on the same member, driving member 4 in figure 5 and driven member 10 in figure 9. This taken into consideration with the limitations of claim 4 "locking member includes a resilient member slidably pressing the link against the other of the driven member and the drive member that remains engaged with the link," both suggests and is limited to the interpretation of "the other of the driven member and the drive member that remains engaged with the link" to be --- the member that remains engaged to the link --- as best understood by the examiner. The examiner notes the recitation of "the one of the driven member and the drive member that disengages from the link" used in claim 7 to describe a member that is not engaged with the link and suggests applying this language to the claims objected to. As best understood by the examiner the recitation of "the other of the driven member and the drive member that remains engaged with the link" is considered to be --- the one of the driven member and the drive member that remains engaged with the link" for proper clarity. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3, 5, 7-8, and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura EP1197672, in view of Kojiro JP 03-228595, further in view of Kishibuchi et al. US

Art Unit: 3746

5,683,299. Reference to Kimura EP 1197672 and Kojiro JP 03-228595 will be made using Kimura US 2002/0162720 and abstract of Japan publication number 03-228595, respectively. Kimura teaches all the limitations as claimed for a power transmission including: **[claim 1]** a driven member 35 rotatable by an engine, a drive member 32 rotatable coaxially with the driven member 35 to rotate a drive shaft 6 of a compressor for regulating displacement of the compressor, a link 42 interconnecting the driven member 35 and the drive member 32 with each other in a crossing direction relative to the drive shaft 6, the link 42 being disengageable from the drive member 32, and a first engagement member 39 fixed to the drive member 32, wherein said link 42 has a hole at one end portion, hole formed to accommodate elements 36 and 37, thereof and an open end 43 at the other end portion thereof which releasably receives said first engagement member 39; **[claim 2]** a link 42 is rotatably mounted to the driven member 35 that remains engaged with the link 42, as shown in figure 6; **[claim 3]** the driven member 35 that remains engaged with the link 42 includes a locking member 37 configured to lock with the link 42 disengaged from the one the drive member (¶0042); **[claim 5]** the driven member 35 that remains engaged with the link 42 includes a second engagement member 36, and wherein the hole, as formed to accommodate element 36, is fitted with the second engagement member 36; **[claim 7]** a first engagement member 39 is integrated with the drive member 32 that disengages from the link 42, and the second engagement member 36 is integrated with the driven member 35 that remains engaged with the link 42; **[claim 8]** a link 42 of transmission for a compressor is interposed between the driven member 35 and the drive member 32; **[claim 12]** and a plurality of links 42 are arranged about the shaft 6 at an equal angular interval, as shown in figure 3.

Kimura fails to teach the specific design for a disengaging link 8 for a drive mechanism that is taught by Kojiro that is deformed to release a driven member 3 from the driving motion of a motor. The design of Kojiro including a slot 9 that accepts and engagement member 4 of the driven member and causes the link 8 to deform when a disengaging operation occurs. Kojiro further teaches engagement member 7 for the element which remains constantly engaged with a link 8, capable of passing through an open end 10 slot 9 to disengage from a link 8. Kimura essentially teaches half of this type of link which is claimed and as evidenced by Kishibuchi the design for a connection between rotating members of a compressor including a link 13 that engages an deforming engagement member 7 essentially accomplished by arms of a link 13a and 13b forming a slot to accept an engagement member 7 to connect a driven member 11 to a drive member 4 to engage a drive shaft of a compressor to rotate. As shown a variety of designs for a link between a driven member and drive member, including the structure which is claimed. Each design performs the same function of engaging and disengaging the drive and driven member during specific operating conditions. The linking elements of Kimura, Kojiro, and Kishisbuchi are equivalent structures, and therefore it would have been an obvious matter of design choice to one of ordinary skill in the art at the time of the invention to provide a link of the structure taught by Kojiro, in which the link remains engaged to a driving or driven member, and formed with a slot to accept and engagement member protruding from the member (driven or driving) that does not remain constantly engage by the link.

Kimura discloses the claimed invention except that a link 42 is formed with a single arm that accepts and engagement member instead of a link that has essentially two arms forming a slot that accepts an engagement member. Kojiro shows that **[claim 1]** a slotted link between

a drive member and a driven member, wherein **[claim 11]** an engagement member 7 of one of the drive member and driven member which remains constantly engaged with a link, capable of passing through an open end 10 slot 9 to disengage from a link 8, was an equivalent structure known in the art. In order to rely on equivalence as a rationale supporting an obviousness-type rejection, the equivalency must be recognized in the prior art. In *re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958). *Kishibuchi* represents evidence that a link having two arms and forming a slot and a link formed with a single arm that accepts and engagement member were art-recognized equivalent structures for a link between a driven member and drive member for compressor. Therefore, because these two link structures were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute a link having two arms and forming a slot a link formed with a single arm that accepts and engagement member. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. In *re Fout*, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura in view of Kojiro, further in view of Kishibuchi as applied to claim 5 above, still further in view of Kishibuchi. Kimura teaches all the limitation as discussed with the exception of the limitation that is taught by Kishibushi for a transmission for a compressor provided with deformable engagement member 7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a deformable engagement member as part of a connection between rotating members of a compressor in order to provide a link that can absorb a fluctuation in torque transmitted between the driven and driving rotating members (col. 2 ll. 11. 27-28).

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kimura in view of Kojiro, further in view of Kishibuchi. A combination of the references teaches all the limitations as discussed including a linking member 8 that is formed and a single member or plate. A combination of the references fails to teach plates of an identical shape and dimension stacked on each other. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide two linking mechanism stacked on top of one another in order to provide a connection between a driving member and a driven member, since such a modification would amount to a mere duplication of parts. It has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

***Allowable Subject Matter***

11. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

12. Applicant's arguments with respect to claims 1-9 and 11-12 have been considered but are moot in view of the new ground(s) of rejection.

13. The examiner however notes the applicant's argument regarding claim 9 that a reliance on *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8. The rejection states that a duplication of essential working parts requires routine skill in the art. With regards to applicant's argument that the prior art cited does not teach all the features as claimed the examiner disagrees. With the citation of the French patent 1,227,176 cited as prior art by *St. Regis* the applicant in effect the applicant provides the case that the feature which is claimed, multiple plates, was known in



the art. Therefore by applicant's own admission all the features for the limitations were known and taught by the prior art as incorporated by reference to *St. Regis*.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEONARD J. WEINSTEIN whose telephone number is (571)272-9961. The examiner can normally be reached on Monday - Thursday 7:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/  
Supervisory Patent Examiner, Art Unit  
3683

/Leonard J Weinstein/  
Examiner, Art Unit 3746